

ENVIRONMENTAL ASSESSMENT
FISHING
MORGAN BRAKE NATIONAL WILDLIFE REFUGE
YAZOO CITY, MISSISSIPPI

DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE
YAZOO CITY, MISSISSIPPI

Compatability Statement
on
Opening Morgan Brake National Wildlife Refuge
to
Sport Fishing

The Refuge Recreation Act of 1962 (16 USC 460k) authorizes the Secretary of the Interior to administer such areas for public recreation as an appropriate incidental or secondary use only to the extent that it is practicable and not inconsistent with the primary objectives for which the area was established. In addition, the Refuge Recreation Act requires (1) that any recreational use permitted will not interfere with the primary purpose for which the area was established; and (2) that funds are available for the development, operation, and maintenance of the permitted forms of recreation.

The recreational use authorized by these regulations will not interfere with the primary purposes for which Morgan Brake National Wildlife Refuge was established. This determination is based upon consideration of, among other things, the Service's Final Environmental Statement on the Operation of the National Wildlife Refuge System published in November, 1976, and the Morgan Brake Fishing Plan, Environmental Assessment, and Section 7 Evaluation. Funds are available for the administration of recreational activities by these regulations.

Summary

Description of Proposed Action

It is proposed that Morgan Brake NWR be opened to sport fishing. Seasons will be within the framework set forth by the State of Mississippi and will serve to provide a wide range of benefits to the public.

Impacts of the Proposed Action

Substantial long-term benefits of the proposed action will be increased recreational opportunities available to the public and effective management of prolific fish populations present on the refuge. The possibility of adversely affecting protected or endangered species will be increased by the proposal.

Alternatives Considered

- A. Preferred Alternative
- B. No Action Alternative
- C. Reduction in Size of Area Open and in Length of Seasons

MORGAN BRAKE NWR ENVIRONMENTAL ASSESSMENT

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I. PURPOSE OF AND NEED FOR ACTION

The purpose of the proposed action is to provide recreational opportunities in the form of sport fishing by the utilization of a renewable resource. Legal fishing used as a proper management tool is proposed to enhance the fisheries resource by maintaining balanced populations.

II. PROPOSED ACTION AND ALTERNATIVES

A. Proposal

The fishing plan calls for general regulations pertaining to licenses, creel limits, and methods of taking fish to follow those of the Mississippi Department of Wildlife Conservation as published annually (see attachment). Currently the applicable species of fish which may be taken in Mississippi and their respective daily limits are:

Black Bass	10	Walleye	15
White Bass	50	Sauger	15
Crappie	50	Sunfishes	100 ^a

The aggregate daily limit of all species is 100 per day and the possession limit is 200. All refuge waters will be open to sport fishing within the framework established by the State.

B. No Action Alternative

This alternative would involve not opening Morgan Brake NWR to sport fishing.

C. Reduction in Size of Area Open to Fishing and Length of Season

This alternative would involve not opening some waters of Morgan Brake NWR to fishing and reducing the number of days available for fishing.

III. ENVIRONMENTAL CONSEQUENCES

A. Proposal

1. Impact on Fisheries Resource

As fishing pressure on Morgan Brake NWR is relatively light, no significant impact on the resource should occur by allowing the activity to continue. Removal of any "rough" fish from the population will probably be beneficial. The removal of any fish represents a permanent loss of the individual and a short term loss to the population. It is possible that small isolated populations of game fish may become temporarily over-harvested by fishing. The extent of the resource is such that it will not offer abundant fishing opportunities from which significant impacts may occur.

2. Impact on Wildlife Resources

Some slight disturbance to waterfowl in winter months and other wildlife throughout the year by fishermen could occur. This disturbance should be minor and any potential problems can be solved by time/space scheduling of fishing activities.

3. Impact on Endangered Species

Fishermen-alligator confrontations are possible and to the extent that firearms restrictions are enforceable the potential for shootings is reduced. Most public users during the period of peak alligator activity are fishermen. Because of this, most of any alligator harassment and mortality that may occur could possibly be linked, at least indirectly, to sport fishing activities. Encouraging proper public awareness of alligators and strict enforcement of all applicable laws should preclude any significant impacts.

Bald eagles and peregrine falcons have not yet been observed on the refuge. The most likely time of their occurrence coincides with the period of lowest fishing activity (winter). Any impacts would be limited to temporary disturbance of individual birds.

4. Impact on Public Use

Sport fishing and hunting activities will overlap to some degree, particularly during the fall period. No conflicts of any consequence are expected, however, because of the nature of habitats present and the time span between peak use periods for these activities. Non-consumptive public use on the refuge is presently low due to access limitations and a general lack of interest in the area for activities such as nature

study and photography. Only a moderate increase in these activities is expected, and no conflicts between the refuge fishing program and non-consumptive users are expected.

5. Impact on Human Environment

The consumptive use of the fisheries on Morgan Brake NWR will be offensive to that segment of our society who question the morality of killing any animal. Fishing by many others is considered a legitimate and beneficial recreational pursuit.

B. No Action

No action would involve not opening the refuge to sport fishing. Potential disturbance to waterfowl or endangered species by fishermen would be lessened. A small but important loss of wildlife-oriented recreation would occur. It is probable that public attitudes in Mississippi would become hostile toward the Fish and Wildlife Service if fishing were prohibited on Morgan Brake. Other more significant Service programs could be adversely affected by such action.

C. Reduce Size of Area Open to Fishing and Length of Season

Some additional protection of endangered species would be afforded. Any waterfowl disturbances could be curtailed. A loss in recreational opportunities would correspond to any reduction in fishing area or seasons. Public attitudes would be negatively affected according to the extent of the restrictions.

IV. DESCRIPTION OF THE AFFECTED ENVIRONMENT

A. Location and General Description

Morgan Brake National Wildlife Refuge is located in west central Mississippi in the Yazoo River Basin of the Mississippi Delta between the loessial hills and U.S. Highway 49, 21 miles south of Greenwood, Mississippi and approximately 3 miles north of Tchula, Mississippi, in Holmes County. The refuge occupies 1330 acres with additional land acquisition planned.

Topography is level to gently sloping with maximum land elevation seldom exceeding 115 feet mean sea level.

The soils consist of somewhat poorly drained clay subsoils to well drained silty soils in natural levees.

Drainage in Morgan Brake Refuge is primarily through Morgan Brake and Millstone Bayou into Tchula Lake.

The climate is humid sub-tropical with an average annual temperature of 64.8 degrees. Mean annual rainfall is 51.8 inches. Winter rains, November through April, account for 30 inches of the annual total. Mississippi Delta economy is centered around specialized plantation agriculture with soybeans and cotton as principal crops.

B. Habitat and Wildlife

Historically, the Mississippi Delta area produced an abundance of diverse fish and wildlife resources. The clearing of bottomland hardwood forest in this century to produce agricultural crops has resulted in a drastic decline in those high quality resources. Morgan Brake habitat types are dominated by bottomland hardwood forests interspersed with bald cypress/tupelo sloughs and "brakes" (Type 7 wetlands) and shallow depressions characterized by buttonbush, water elm, swamp privet and willow (Type 6 wetlands).

Dominant forest species are sweet gum, water oak and willow oak occurring along the ridges, and sugarberry, American elm, green ash, bitter pecan, and overcup oak occupying the intermediate to low flats. Bald cypress, swamp cottonwood and swamp tupelo are the dominant species in the low depressions and sloughs. The fauna is diverse

with many popular and important species present. Refuge wetlands are noted for large numbers of wintering waterfowl. Mallards, wood ducks, wigeon, green-winged teal and gadwall are the most numerous migratory waterfowl, and wood ducks are common summer nesters and winter residents on Morgan Brake.

The principal resident game species are fox and gray squirrel, white-tailed deer, eastern wild turkey, raccoon, and swamp and cottontail rabbit. Furbearing species of the area include beaver, nutria, raccoon, muskrat, mink, otter, weasel, spotted and striped skunk, and bobcat. Non-game wildlife is also abundant on the refuge with the diversity and interspersed of habitat types creating an edge effect beneficial to wildlife. There is only a small population of American alligators on the refuge, but there is considerable habitat available for this endangered species. Although the southern bald eagle and the peregrine falcon have not been observed in the Morgan Brake area in recent years, both are winter migrants of the Yazoo Basin. Sloughs, streams, beaver impoundments and other refuge wetlands provide only a limited amount of fish habitat except during high water periods when concentrations of fish may be high in suitable areas. Species may include any of the fishes common to the Mississippi or Yazoo Rivers.

C. Existing Human Uses

Before acquisition, primary human uses of the refuge were timber management, hunting, fishing and trapping. Wildlife use in recent years has been dictated by leased and privately owned hunting camps whose primary interest has been deer and waterfowl hunting.

D. Cultural Resources

A cultural resources survey has not yet been conducted on Morgan Brake Refuge. There are no sites on the refuge or within the proposed acquisition area that are listed on the National Register of Historic Places or designated as a National Natural Landmark.

E. Refuge Development

As a recent addition to the NWR system, no development has been carried out on Morgan Brake. An internal road system exists on the refuge that consists of improved dirt roads which have been closed during wet weather and they are in excellent shape.

Development feasibility for two water control structures, one parking area, one boat launching ramp, and interpretive walking trail and an on-site headquarters building is under study at the time of this writing. The existing roads may be improved somewhat to meet access needs. All existing buildings and structures will be removed.

V. CONSULTATION AND COORDINATION WITH OTHERS

Consultation has been received from the Fish and
Wildlife Service Area Office in Jackson, Mississippi,
and the Mississippi Department of Wildlife Conservation.

50 CFR Part 33

Morgan Brake National Wildlife Refuge, Mississippi

Agency: Fish and Wildlife Service, Interior

Action: Special Regulations.

SUMMARY: The Director has determined that the opening to sport fishing of Morgan Brake National Wildlife Refuge is compatible with the objectives for which this area was established, will utilize a renewable natural resource, and will provide additional recreational opportunity to the public. This document establishes special regulations effective for the upcoming sport fishing seasons.

DATES: Period covered - March 1, 1982 through February 28, 1983.
See State regulations for bag limits.

FOR FURTHER INFORMATION CONTACT: The Area Manager or the Refuge Manager at the address or telephone number listed below:

Area Manager, U.S. Fish and Wildlife Service
200 East Pascagoula Street, Suite 300
Jackson, Mississippi 39201. Telephone (601)960-4900

Refuge Manager, Morgan Brake National Wildlife Refuge
P. O. Box 107
Yazoo City, Mississippi 39194. Telephone (601)746-8511

SUPPLEMENTARY INFORMATION: Sarah McClellan is the primary author of these special regulations.

Sport fishing is permitted on Morgan Brake National Wildlife Refuge in accordance with 50 CFR Part 33, all applicable State regulations and the following special regulations:

The Refuge Recreation Act of 1962 (16 USC 460k) authorizes the Secretary of the Interior to administer such areas for public recreation as an appropriate incidental or secondary use only to the extent that it is practicable and not inconsistent with the primary objectives for which the area was established. In addition, the Refuge Recreation Act requires: (a) That any recreational use permitted will not

interfere with the primary purpose for which the area was established; and, (b) that funds are available for the development, operation, and maintenance of the permitted forms of recreation.

The recreational use authorized by these regulations will not interfere with the primary purposes for which this refuge was established. This determination is based upon consideration of, among other things, the Service's Final Environmental Statement on the operation of the National Wildlife Refuge System published in November, 1976. Funds are available for the administration of the recreational activities permitted by these regulations.

33.5 Special regulations; Sport fishing; for individual wildlife refuge areas

- (1) Sport fishing is permitted year-round in all refuge waters.

The Department of the Interior has determined that this document is not a significant rule and does not require a regulatory analysis under Executive Order 12044 and 43 CFR Part 14.

FISHING PLAN
MORGAN BRAKE NATIONAL WILDLIFE REFUGE

PREPARED:
MARCH 1980

Recommended by:

George Chandler
Project Leader

7/10/80

Area Manager

Regional Director

Approved: _____
Director

I. INTRODUCTION

A. Location and General Description

Morgan Brake NWR is located in the northwest corner of Holmes County in east central Mississippi. The refuge lies about two miles north of Tchula and thirty miles north of Yazoo City, Mississippi. Upon completion of acquisition Morgan Brake NWR will encompass approximately 6,000 acres of bottomland hardwoods and associated wetland types.

The Soil Conservation Service has identified soils of the refuge to be in the Alligator-Forestdale series. Both are predominantly grayish acidic clays with moderately high water-holding capacity.

Morgan Brake is relatively flat. Elevations vary from 105 feet Mean Sea Level to 117 feet MSL. Surface drainage is very slow and water flow is impeded by natural and man-made obstructions.

The climate of the Yazoo Basin is humid sub-tropical. The average annual temperature is 64.8 degrees with annual precipitation averaging 52 inches.

B. Habitat and Wildlife

Historically, the Mississippi/Yazoo Basin produced an abundance of diverse fish and wildlife resources. The clearing of bottomland hardwood forests in this century to produce agricultural crops has resulted in a drastic decline in these high quality resources. Refuge habitat types are dominated by bottomland hardwood forests interspersed with bald cypress/tupelo sloughs and "brakes" (Type 7 wetlands) and shallow depressions characterized by buttonbush, water elm, swamp privet, and willow (Type 6 wetlands). Dominant forest species include sweet gum, water oak, willow oak occurring along the ridges; sugarberry, American elm, green ash, bitter pecan, and overcup oak occupy the intermediate to low flats.

The fauna is diverse with many popular and important species present. Refuge wetlands are noted for large numbers of wintering waterfowl. Mallard, wood duck, wigeon, green-winged teal, and gadwall are the most numerous migratory waterfowl, but many other species of ducks are common. These waterfowl have historically utilized refuge wetlands and flooded hardwood forests for resting and feeding. In addition, this area serves in an important production role for wood ducks.

The principal resident game species are fox and gray squirrel, white-tailed deer, eastern wild turkey, raccoon, and swamp and cottontail rabbit. Furbearing species of the area include beaver, nutria, raccoon, muskrat, mink, otter, weasel, spotted and striped skunk, and bobcat. Non-game wildlife is also abundant on the refuge. Mississippi State University listed 46 species of mammals, 168 species of birds, and 83 species of herpetofauna in the Yazoo Backwater Area in their Environmental Inventory and Assessment of the Yazoo Pump Study. The American alligator is found extensively in the Yazoo Backwater Area, and considerable acreage of suitable habitat exists in Morgan Brake. Although neither the southern bald eagle nor the American peregrine falcon have been observed in the Morgan Brake area in recent years, both are winter migrants of the Yazoo Basin. Sloughs, streams, beaver impoundments, and other refuge wetlands provide only a limited amount of fish habitat except during high water periods when concentrations of fish may be high in suitable areas. Species may include any of the fishes common to the Mississippi or Yazoo Rivers.

C. Refuge Development

Proposed management will promote the establishment of a perpetual and viable bottomland hardwood forest. Emphasis will be on maintaining wintering waterfowl, endangered species, and providing compatible wildlife-oriented recreation. Proposed physical facilities include an official visitor contact station, maintenance and storage shed and road system.

D. Refuge Objectives

Specific refuge objectives have not yet been established. NWR System objectives and FWS intent during the acquisition period, however, clearly indicate our primary goals to be endangered species preservation and enhancement, water protection and habitat preservation and improvement, bottomland hardwood habitat preservation, and provision of substantial opportunities for wildlife oriented public use.

II. FISHING PROPOSAL

A. General Regulations

General sport fishing regulations pertaining to licenses, creel limits, and methods of taking fish will follow those of the State of Mississippi and will be open to sport fishing within the framework established by the state. The physiography of refuge waters is not conducive to commercial fishing at this time. All refuge regulations covered under Title 50 Code of Federal Regulations that relate to fishing (i.e., camping, littering, etc.) will apply.

B. Fisheries Data and Participation

Little quantitative data is available concerning the fisheries resource on Morgan Brake NWR. Most resident warmwater species are thought to occur on the refuge. Fish populations in this type habitat tend to be out of balance in favor of forage fish species. Successive years of low water tend to reduce the flushing effect of local waters. An increase of rough fish species such as carp and buffalo during this time contributes to turbidity, creating less desirable conditions for game fish populations. A prolonged "backwater" appears to significantly stimulate spawning activity. Both forage and carnivorous fish populations often increase dramatically in response to lingering overflows.

Sport fishing activities on Morgan Brake varies annually and between seasons. Spring is usually the peak fishing period but success is dependent on river overflows. The amount of current participation is unknown but thought to be low. A total of 2,590 (2,425 resident and 165 non-resident) fishing licenses were sold in Yazoo County in 1977-78. Most refuge fishermen are local residents. An increase in participation may occur upon completion of refuge developments.

C. Justification

Morgan Brake NWR offers opportunities for sport fishing recreation and provides for the utilization of a renewable resource. Legal fishing and proper management should enhance the resource by maintaining proper forage-carnivorous fish ratios. There is a local demand for sport fishing, and conflicts with other refuge programs and objectives are minimal.

III. INTERRELATIONSHIP WITH OTHER REFUGE PROJECTS OR PROGRAMS

A. Waterfowl Management

Program design and management for Morgan Brake NWR will focus on migratory waterfowl protection and habitat improvement. Sport fishing should have little effect on this program. Fishing pressure is very low in winter months when waterfowl concentrations are present. Any waterfowl disturbance problems that might arise in the future could be solved by time and space scheduling of fishing activities.

B. Endangered Species

Sport fishing as defined in this report should pose no threat to endangered species. Fishermen - alligator confrontations are possible and to the extent that firearms restrictions are enforceable the potential for shootings is reduced. Interactions between fishermen and bald eagles and fishermen and peregrine falcons should be minimal. Any such contacts will cause only temporary disturbance of individual birds.

C. Hunting

Sport fishing and hunting activities may overlap to some degree, particularly during the Fall period. No conflicts of any consequence are expected, however, because of the nature of habitats present and the time span between peak use periods for these activities.

D. Non-Consumptive Public Use

The demand for non-consumptive public use in Morgan Brake is presently low and is expected to increase only moderately during the foreseeable future. Limited demand for wildlife/nature observation, photography, picnicing, etc., is expected. No conflicts of any consequence should occur.

IV. FUND AND MANPOWER REQUIREMENTS

A. Capital Investments

Boat, motor, trailer	\$1,500.00
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B. Equipment

Life preservers, paddles, etc.	150.00
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C. Fuel

Yearly	100.00
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D. Man Days of Enforcement

15 days	1,000.00
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Total:	\$2,750.00
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